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Aldo the robot makes parents proud

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Grant supports science scholarships

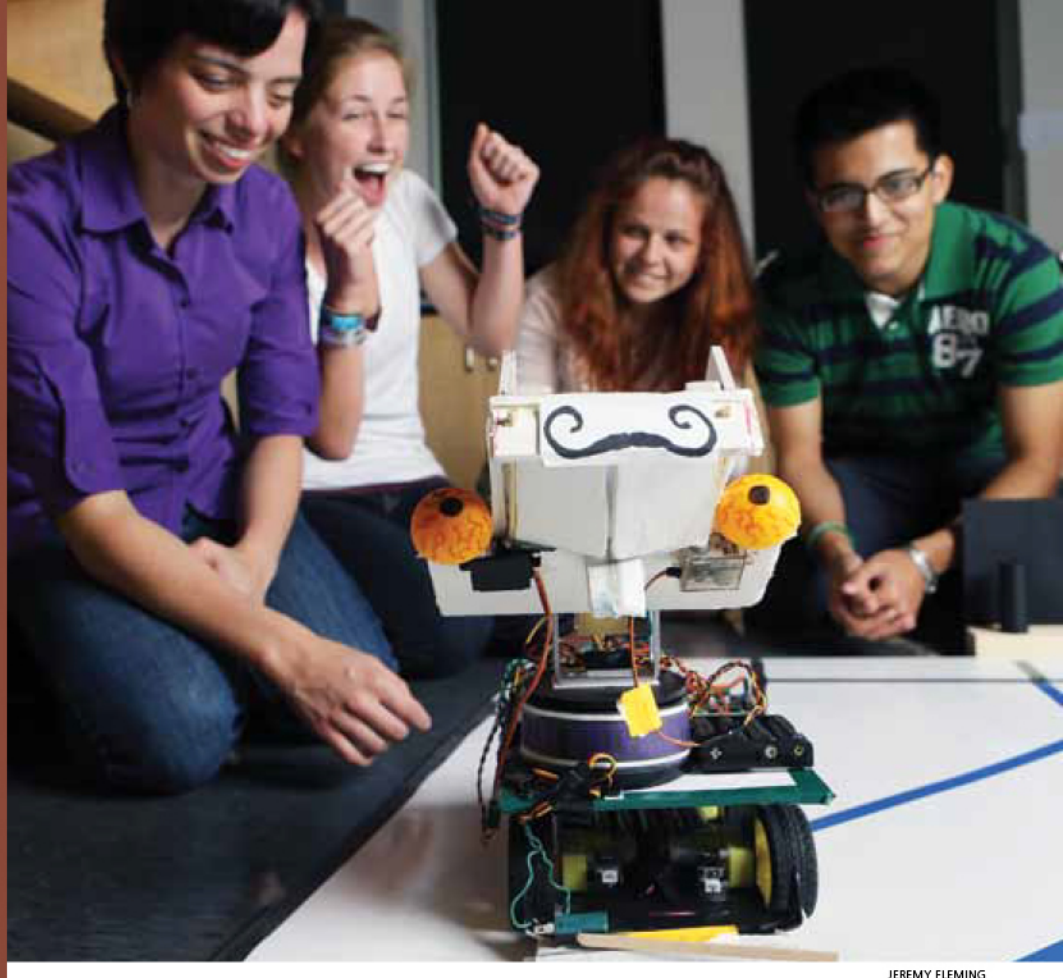
THE NATIONAL SCIENCE FOUNDATION has awarded Furman a five-year, $600,000 grant to provide merit-based scholarships to students who demonstrate financial need and wish to pursue degrees in science-based fields.

Beginning this fall, biology and chemistry majors entering Furman are eligible to receive financial aid awards of up to $40,000 as part of the program funded by the foundation's Science, Technology, Engineering and Mathematics arm. The Science Opportunities, Activities and Resources (SOAR) Scholars initiative will provide critical support for students for whom the cost of attendance at Furman would be a hardship.

The program aims to enhance science opportunities for students from South Carolina racial and ethnic groups traditionally underrepresented in science fields — African Americans, Hispanics/Latinos, Native Americans, Pacific Islanders. Between 15 and 21 students are expected to benefit from the program over the next five years, with Furman contributing funding for the program in the sixth year.

SOAR Scholars will participate in a host of activities, including a one-week, pre-college bridge experience offered immediately before the freshman year, weekly interdisciplinary seminars, opportunities for science-based community outreach through established programs directed at disadvantaged populations, and guaranteed placement into paid summer research experiences on campus. SOAR Scholars also will have access to peer mentoring programs, regular meetings with permanently assigned secondary advisors, on-campus tutoring, and support from the university's Office of Multicultural Affairs.

John Kaup, Furman's coordinator of science education, is the director of Furman's SOAR Scholars program, with assistance from John Wheeler (chemistry), Eli Hestermann (biology) and Marion Martin (chemistry).



JEREMY FLEMING

Aldo the robot makes parents proud

ALDO MAY HAVE KEPT his parents up until 3 a.m. the night before he was scheduled to compete, but in the end he came through with flying colors.

Aldo is a robot, the brainchild of four Furman students who decided they wanted to enter the 2012 Atmel Robotics Contest, held the last weekend of September in New York City. Once his parents diagnosed the cause of his pre-contest crankiness — maybe it was the unfamiliar hotel room or the noise from Big Apple traffic — he went on to take second place in the competition.

Aldo's ability to flex his microcontroller muscles culminated a four-month project by a group of juniors — from left, Kristina Pardo (physics), Andrea Fant (math/education), Evdokiya Kostadinova (physics) and Haris Kahn (physics) — as part of the physics department's Science, Technology, Engineering and Mathematics (STEM) initiative. Professor John Conrad coordinated the students' work.

Contest participants were tasked with designing a robot that could perform a series of acts autonomously. Four balls — two ping pong balls and two golf balls — were lined up randomly on an array of pedestals. According to Conrad, the robot used optical sensors to move to a pedestal, where it picked a ball, determined what kind of ball it was, then made its way along "a somewhat tortuous path" to place the ball in the appropriate receptacle. The process continued until all four balls were retrieved, sorted, transported and delivered.

A representative from Folsom Lake College in California took first prize in the contest.

Visit http://blogs.furman.edu/physicssteminitiative to see Aldo in action.